System 6
Non-Sterile Battery
REF 6126-110

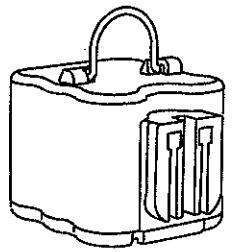
stryker

Instructions For Use

R_x ONLY

CE 0197

ENGLISH
ESPAÑOL
DEUTSCH
FRANÇAIS
ITALIANO
NEDERLANDS
SVENSKA
DANSK
SUOMI
PORTUGUÊS
NORSK
POLSKI
ΕΛΛΗΝΙΚΑ
日本語
中文
한국어



US Patent 6,018,227 and 6,331,761 and other Patents Pending.

Intended Use

The Stryker Non-Sterile Battery REF 6126-110 is used to power Stryker System 6 handpieces. DO NOT sterilize these batteries. After a Non-Sterile Battery is charged, it is placed in a sterilized Aseptic Housing using a Transfer Shield. The housing containing the battery is then installed into a Stryker System 6 handpiece (see chart below).

Non-Sterile Battery	Aseptic Battery Kit*	Handpieces
REF 6126-110	REF 6126	Single Trigger Rotary REF 6203 Dual Trigger Rotary REF 6205 Reciprocating Saw REF 6206 Sternum Saw REF 6207 Sagittal Saw REF 6208 Precision Oscillating Tip Saw REF 6209

*Includes Non-Sterile Battery REF 6126-110, Transfer Shield REF 6126-130, and Aseptic Housing REF 6126-120.

User/Patient Safety*

WARNINGS:

- Only trained and experienced health care professionals should use this equipment. Before using any system component or any component compatible with this system, read and understand the instructions. Pay special attention to WARNING information. Become familiar with the system components prior to use. Failure to comply may result in patient and/or health care staff injury.
- Upon initial receipt and before each use, inspect each component for damage. Damage may include, but is not limited to, bent contacts and cracks in the housing. DO NOT charge or use if damage is apparent. Failure to comply may result in patient and/or health care staff injury.
- DO NOT use this equipment in the presence of a mixture consisting of a flammable anesthetic and air or oxygen or nitrous oxide. Failure to comply may result in patient and/or health care staff injury.

*If you need more information, contact your Stryker sales representative or call Stryker customer service at 1-800-253-3210. Outside the US, contact your nearest Stryker subsidiary.

Instructions

CAUTION: ALWAYS remove the non-sterile battery from the aseptic housing before charging the battery. Failure to comply may result in product damage.

NOTES:

- Recharge batteries before each surgery, even if they have not been used, to ensure the maximum running time.
- The charge cycle takes approximately 5 to 90 minutes.
- The expected run time for each battery is 2.5 to 15 minutes depending on demand procedure utilization.
- Only use batteries that have been charged within the last 48 hours.
- Store batteries on the charger where they will be maintained fully charged. DO NOT store batteries in handpieces where they will discharge. Discharge will occur even though the handpiece is not running.
- Charge the batteries at normal room temperature, approximately 64 - 75 °F (18 - 24 °C).

1. To properly install the battery into a handpiece, read and understand the appropriate Stryker handpiece instructions for use.
2. To properly charge the battery, read and understand the instructions for use provided with the Stryker System 6 Battery Charger REF 6110-120 configured with charger module REF 6110-625.

Symbol Definitions

 Ni-MH	NICKEL-METAL HYDRIDE rechargeable battery. Must be recycled or disposed of properly.
	Recycle or dispose of properly.

Disposal/Recycle Information

This battery contains Nickel-Metal Hydride. Follow the current local regulations governing environmental protection to recycle or dispose of the non-sterile battery.

Cleaning Recommendations

CAUTION: DO NOT immerse or sterilize a non-sterile battery.

1. Remove the non-sterile battery from the aseptic housing.
2. Inspect the battery housing for cracks or damage. DO NOT use the battery if damage is apparent.
3. Wipe the non-sterile battery with a clean, dry cloth.

Specifications*

Model:	REF 6126-110 Non-Sterile Battery
Size:	2.1 inch (53 mm) 2.1 inch (53 mm) 2.6 inch (66 mm)
Weight:	0.79 lb (0.36 kg)
Electrical:	2.0 A charge, 9.6 V ⎓ output
Duty Cycle:	See the recommended duty cycle information supplied with each handpiece.
Enclosure Protection:	IPX0 Ordinary Equipment
Environmental Conditions:	See the operating, storage, and transportation specifications supplied with each handpiece.

*Specifications are approximate and may vary from unit to unit or as a result of power fluctuations.

System 6
Aseptic Battery Kit
REF 6126

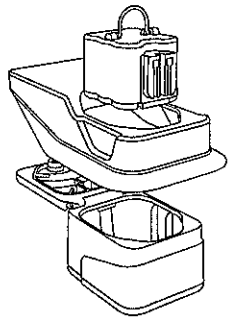
stryker®

Instructions For Use

R_x ONLY

CE 0197

ENGLISH
ESPAÑOL
DEUTSCH
FRANÇAIS
ITALIANO
NEDERLANDS
SVENSKA
DANSK
SUOMI
PORTUGUÊS
NORSK
POLSKI
ΕΛΛΗΝΙΚΑ
日本語
中文
한국어



Intended Use

The Stryker System 6 Aseptic Battery Kit provides a sterile enclosure for the Stryker Non-Sterile Battery. After a Non-Sterile Battery is charged, it is placed in a sterilized Aseptic Housing using a Transfer Shield. The housing containing the battery is then installed into a Stryker System 6 handpiece (see chart below).

Non-Sterile Battery	Aseptic Battery Kit*	Handpieces
REF 6126-110	REF 6126	Single Trigger Rotary REF 6203 Dual Trigger Rotary REF 6205 Reciprocating Saw REF 6206 Sternum Saw REF 6207 Sagittal Saw REF 6208 Precision Oscillating Tip Saw REF 6209

*Includes Non-Sterile Battery REF 6126-110, Transfer Shield REF 6126-130, and Aseptic Housing REF 6126-120.

User/Patient Safety*

WARNINGS:

- Only trained and experienced health care professionals should use this equipment. Before using any system component or any component compatible with this system, read and understand the instructions. Pay special attention to WARNING information. Become familiar with the system components prior to use. Failure to comply may result in patient and/or health care staff injury.
- Upon initial receipt and before each use, inspect each component for damage. Damage may include, but is not limited to, bent contacts and cracks in the housing. DO NOT charge or use if damage is apparent. Failure to comply may result in patient and/or health care staff injury.
- DO NOT use this equipment in the presence of a mixture consisting of a flammable anesthetic and air or oxygen or nitrous oxide. Failure to comply may result in patient and/or health care staff injury.

*If you need more information, contact your Stryker sales representative or call Stryker customer service at 1-800-253-3210. Outside the US, contact your nearest Stryker subsidiary.

Symbol Definitions*

			
Ni-MH NICKEL-METAL HYDRIDE rechargeable battery Must be recycled or disposed of properly.	Recycle or dispose of properly.	Lock	Unlock

*Symbols appear on the Aseptic Battery Kit components.

Instructions

CAUTION: ALWAYS remove the non-sterile battery from the aseptic housing before charging the battery. Failure to comply may result in product damage.

NOTE: See the instructions supplied with the System 6 Non-Sterile Battery and the System 6 Charger used to recharge the batteries. Instructions contain important safety information and charging instructions.

To Install Non-Sterile Battery

WARNING: DO NOT use the Aseptic Housing, Transfer Shield, or Non-Sterile Battery unless they are dry. Failure to comply may result in patient and/or health care staff injury.

NOTE: Ensure more than one sterilized Aseptic Battery Kit is available in case a second battery installation is necessary.

Instructions (cont'd)

To Install Non-Sterile Battery

CAUTION: DO NOT allow the battery contact terminals to touch metal objects. Failure to comply may compromise battery performance and result in product damage.

Sterile Assistant Action

1. Open the lid (see figure 1).

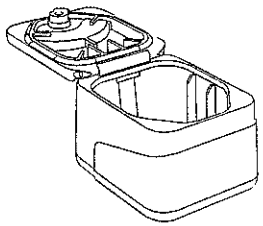


Figure 1. Open Lid

2. With the aseptic housing chamber open, place the transfer shield onto the aseptic housing and over its chamber (see figure 2).

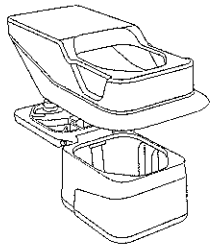


Figure 2. Place Transfer Shield

3. Present the chamber to the circulating assistant.

Circulating Assistant Action

WARNING: DO NOT contaminate the aseptic housing. The transfer shield guards the aseptic housing from contamination during battery installation. Failure to comply may result in patient injury.

Instructions (cont'd)

4. Hold the non-sterile battery by the handle (see figure 3).

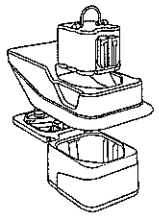


Figure 3. Install Battery

5. While aligning the battery's housing profile with the transfer shield and chamber opening, place the non-sterile battery into the chamber.
6. Lay the battery handle flat against its housing.
7. Remove the contaminated transfer shield and set it aside.

WARNING: Sterilize the contaminated transfer shield before using it again. Failure to comply may result in patient injury.

Sterile Assistant Action

8. Close the aseptic housing lid and move the latch to the lock symbol. Ensure the dot on the latch aligns with the dot on the lock symbol (see figure 4).

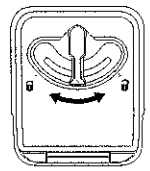


Figure 4. Lock Lid

WARNING: Ensure the dot on the latch aligns with the dot at the lock symbol. Failure to comply may allow the lid to open, exposing the non-sterile battery and result in patient injury.

9. Slide the aseptic housing containing the installed non-sterile battery firmly into the handpiece until it snaps into place.

Instructions (cont'd)

To Replace Battery

WARNING: After installation, DO NOT remove a non-sterile battery from its sterile aseptic housing. If a new battery is required, use another sterile Aseptic Battery Kit and perform the installation procedure. Failure to comply may cause patient injury.

To Remove Non-Sterile Battery

NOTE: Keep the non-sterile batteries as clean as possible because they cannot be sterilized.

1. Wipe all debris from the external surfaces of the aseptic housing.
2. Move the latch to the unlock symbol. Open the aseptic housing lid.
3. Using the battery handle, lift the non-sterile battery out of the aseptic housing chamber.

Disposal/Recycle Information

This battery contains Nickel-Metal Hydride. Follow the current local regulations governing environmental protection to recycle or dispose of the non-sterile battery.

Cleaning Recommendations

CAUTIONS:

- DO NOT immerse or sterilize a non-sterile battery. See the instructions supplied with the non-sterile battery for battery cleaning instructions.
- Review the Material Safety Data Sheet (MSDS) for the enzymatic cleaning solution to verify the pH range. Cleaning agents with pH levels higher than 10.5 may cause the housing material to crack when allowed to contact the surfaces of the housing.
- DO NOT allow fluid to remain inside the recesses of the aseptic housing. Failure to comply may result in corrosion and product damage.

1. Remove the non-sterile battery from the aseptic housing.
2. Inspect the aseptic housing and transfer shield for damage.
3. Use a sponge to wipe the aseptic housing and transfer shield with a neutral or mild alkaline pH enzymatic cleaning solution diluted according to the manufacturer's recommendations.
4. Rinse the aseptic housing and transfer shield under filtered running water until no visible signs of the cleaning solution remain.
5. Visually inspect the aseptic housing and transfer shield for any remaining debris. If any debris is present, repeat the cleaning and rinsing procedure using fresh cleaning solution.
6. Dry the aseptic housing and transfer shield with a lint-free towel or medical-grade compressed air.
7. After cleaning, sterilize the aseptic housing and transfer shield as directed. See *Sterilization Recommendations*.

Sterilization Recommendations*

⚠ WARNINGS:

- Clean and sterilize the aseptic housing and transfer shield before first and every use. Failure to comply may result in patient and/or health care staff injury.
- ALWAYS separate the transfer shields and aseptic housings to ensure proper sterilization. Failure to comply may result in patient and/or health care staff injury.
- ALWAYS ensure the aseptic housing lid remains open during sterilization. Failure to comply may result in patient and/or health care staff injury.

NOTES:

- Steam sterilization (moist heat) is recommended. Stryker Instruments has validated several autoclave cycles for the sterilization of this equipment. However, autoclave design and performance can effect the efficacy of the process. Health care facilities should validate the process they use, employing the actual equipment and operators that routinely process the instruments.
- The final responsibility for validation of sterilization techniques lies directly with the hospital. To ensure the efficacy of hospital processing, all cycles and methods should be validated for different sterilization chambers, wrapping methods and/or various loading configurations.
- Use the Stryker Aseptic Battery Sterilization Case REF 6102-455 to sterilize the aseptic housing and transfer shield.

To obtain optimal performance and prevent damage, perform one of the following sterilization procedures:

"Flash" Autoclave:

- Gravity displacement sterilizer
- 270-272 °F (132-134 °C)
- Unwrapped in an instrument tray
- 10-minute minimum exposure time

*Validation is based on the Association for the Advancement of Medical Instrumentation (AAMI) protocol.

Sterilization Recommendations (cont'd)

Hi Vac:

- Pre-vacuumed sterilizer
- 270-272 °F (132-134 °C)
- Wrapped or unwrapped
- 4-minute minimum exposure time
- 8-minute minimum dry time

ETO:

- 100% ETO
- 120-135 °F (49-57 °C)
- Wrapped in an instrument tray or fully perforated sterilization box
- 2-hour 30-minute minimum exposure time
- 8-hour minimum aeration time

250 °F Gravity:

- Gravity displacement sterilizer
- 250-254 °F (121-123 °C)
- Wrapped in an instrument tray or fully perforated sterilization box
- 50-minute exposure time
- 8-minute minimum dry time

270 °F Gravity:

- Gravity displacement sterilizer
- 270-272 °F (132-134 °C)
- Wrapped in an instrument tray or fully perforated sterilization box
- 35-minute exposure time
- 8-minute minimum dry time

Specifications*

Model:	Non-sterile Battery	Aseptic Housing	Transfer Shields
Part Number:	REF 6126-110	REF 6126-120	REF 6126-130
Size:	2.1 inch (53 mm) 2.1 inch (53 mm) 2.6 inch (66 mm)	3.1 inch (79 mm) 2.9 inch (74 mm) 3.5 inch (89 mm)	1.9 inch (48 mm) 4.3 inch (109 mm) 7.7 inch (196 mm)
Weight:	0.79 lb (0.36 kg)	0.49 lb (0.22 kg)	0.20 lb (0.09 kg)
Electrical:	2 A charge 9.6 V ⎓ output		

*Specifications are approximate and may vary from unit to unit or as a result of power supply fluctuations.

System 6
Four-Station, Modular Battery Charger

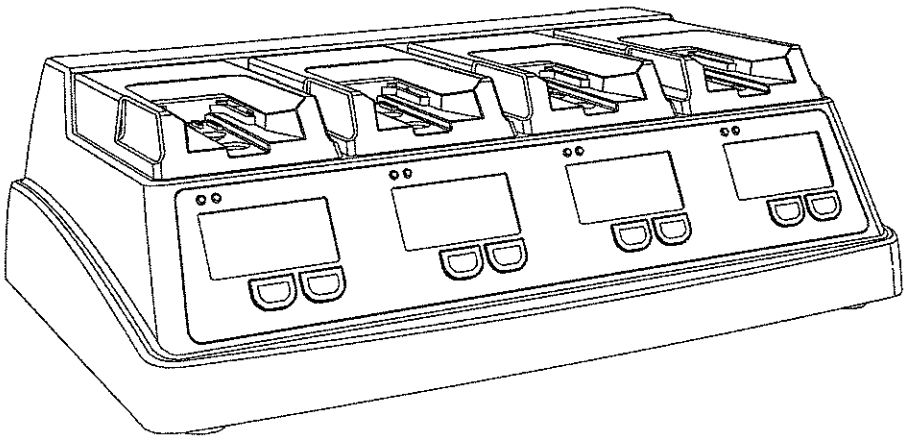
REF 6110-120

stryker®

Instructions For Use

R_x ONLY

CE 0197



Important Information

The words WARNING, CAUTION and NOTE have special meaning and should be reviewed.

WARNING: Disregarding WARNING information may compromise the safety of the patient and/or health care staff and may result in injury.

CAUTION: Disregarding CAUTION information may compromise product reliability and may result in damage.

NOTE: NOTE information supplements and/or clarifies procedural information.

A triangle with an exclamation point alerts the health care professional to read and understand the accompanying instructions, especially the operating, maintenance, and safety information.

Intended Use

The Stryker System 6 Battery Charger is a four-station, modular battery charger intended to charge Stryker handpiece battery packs only.

The battery charger and battery packs are specifically designed to work together so that the battery charger's information screen will provide specific battery pack information.

Accessory Information*

WARNING: Use only Stryker-approved components and accessories, unless otherwise specified. Other accessories may result in increased electromagnetic emissions or decreased electromagnetic immunity of the system. DO NOT modify any component or accessory. Failure to comply may result in patient and/or health care staff injury.

DESCRIPTION	REF
CD2 Charger Module	6110-412
CD2 Diagnostic Charger Module	6110-422
Aseptic Charger Module	6110-426
System 6 Charger Module	6110-625
System 5 Charger Module	6110-415

*Contact your Stryker sales representative for a complete list of additional accessories.

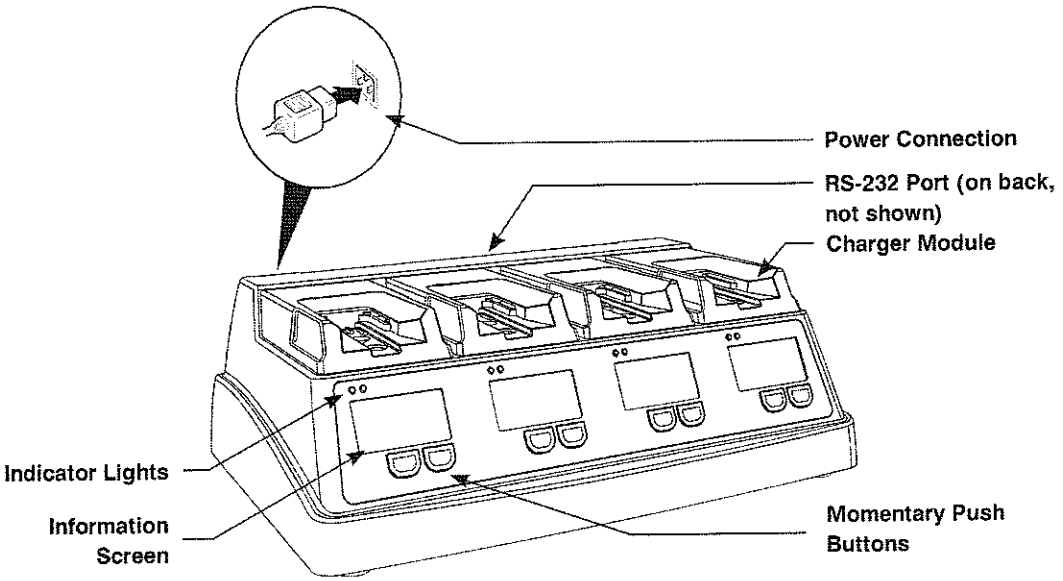
User/Patient Safety*

WARNINGS:

- Only trained and experienced health care professionals should use this equipment. Before using any system component or any component compatible with this system, read and understand the instructions. Pay special attention to WARNING information. Become familiar with the system components prior to use. Failure to comply may result in patient and/or health care staff injury.
- Upon initial receipt and before each use, inspect for damage. DO NOT use if damage is apparent. Perform recommended maintenance as indicated in the instructions for use. Only trained and experienced health care professionals should maintain this equipment. Failure to comply may result in patient and/or health care staff injury.
- DO NOT use this equipment in the presence of a mixture consisting of flammable anesthetic and air or oxygen or nitrous oxide.
- Take special precautions regarding electromagnetic compatibility (EMC) when using medical electrical equipment like the battery charger. Install and place the battery charger into service according to the EMC information in this manual. Portable and mobile RF communications equipment can affect the function of the battery charger.
- DO NOT operate the battery charger using a voltage inconsistent with the rating on the back of the unit.
- Always use the appropriate battery charger when recharging battery packs. Failure to comply may result in patient and/or health care staff injury.
- DO NOT use any battery charger accessory that is not recommended or sold by Stryker. Failure to comply may result in fire, electric shock, or injury.
- DO NOT operate the battery charger with a damaged power cord or plug.
- DO NOT modify the ground of the battery charger power cord. Install the power cord of the the battery charger directly into a hospital grade mains outlet only.
- DO NOT disassemble or service the battery charger; return the equipment to Stryker for service or repair. Failure to comply may result in electric shock or fire.
- Before attempting any maintenance or cleaning, ALWAYS disconnect the power cord from the battery charger to reduce the risk of electric shock.

*If you need more information, contact your Stryker sales representative or call Stryker customer service at 1-800-253-3210. Outside the US, contact your nearest Stryker subsidiary.

Features



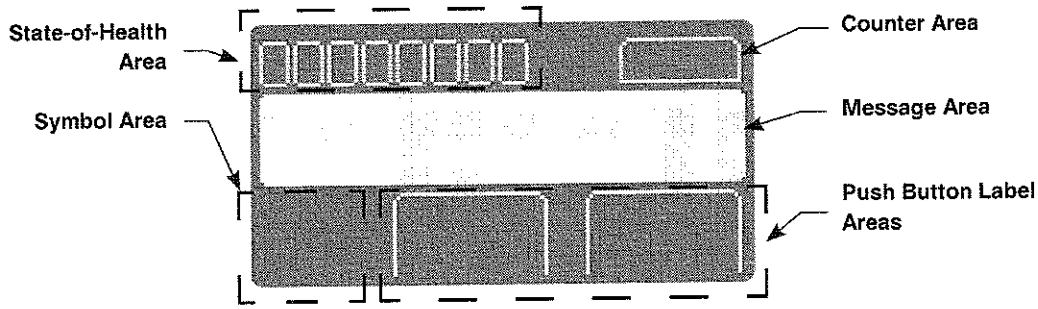
- **Power Connection** - To connect or disconnect the battery charger from facility power, insert or remove the plug from a hospital grade outlet as required.
- **RS-232 Port** - Data port for service use only.
- **Charger Module** - Four charger modules may be installed on the battery charger. Each installed module provides a pocket (1, 2, 3, and 4 from left to right) into which a battery pack may be installed. Each module is designed to accept a specific battery pack type. Four battery packs may be charged simultaneously.
- **Indicator Lights** - The GREEN and YELLOW indicator lights provide status information corresponding to the specific charger module. These lights may be in a steady or blinking state based on the condition of the battery charger, module or battery pack.

Indication	Status
GREEN (steady state)	Battery pack is fully charged. Information screen indicates READY.
YELLOW (steady state)	Battery charger is either charging or discharging the battery pack. Information screen indicates CHARGING or CONDITIONING, respectively.
YELLOW (slow blinking)	Battery pack is at, or close to, the end of its life cycle. Information screen indicates REPLACE.
YELLOW (fast blinking)	Battery charger or charger module failed diagnostic testing. Information screen indicates ERROR.

- **Momentary Push Buttons** -These push buttons allow you to interact with the battery charger. The information screen will provide appropriate push button labels based on the battery pack charging sequence.

Features (cont'd)

- **Information Screen** - The information screen provides status information including battery charger hardware and software revisions, module software revision, error messages, the battery pack state-of-health, and battery pack status including charging, conditioning, ready and replace.



- **State-of-Health Area** - This area consists of eight bars and provides a visual indication that a battery pack is in a charge or conditioning (discharging) state. During charging, the bars increase from left to right. During conditioning, the bars decrease from right to left. In the ready state, the number of bars is constant and indicates the state-of-health of the battery pack. The more bars, the better the ability of the battery pack to store energy.
- **Counter Area** - This area displays numeric information based on the state of the battery charger, modules and/or battery packs. Information displayed includes hardware and software revision numbers, error codes, and the number of charge cycles of the battery pack.
- **Message Area** - This area provides status information and requests user action based on the state of the battery charger, modules and/or battery packs. Messages include SOFTWARE REV, HARDWARE REV, MODULE REV, ERROR, NO MODULE, NO BATTERY, CHARGING, CONDITION? (condition battery), CONDITIONING, READY, and REPLACE.
- **Push Button Label Areas** - These areas are initially blank, but labels will appear above the momentary push buttons based on the state of the battery pack charging sequence.
- **Symbol Area** - This area displays symbols based on the state of the battery charger, charger modules and/or battery packs.

Symbol	Definition
	REPLACE - indicates battery pack failure; properly dispose of the battery pack

Instructions

To Power Up

CAUTIONS:

- Place the electrical power cord where it will not be stepped on, tripped over, or otherwise subjected to damage or stress.
- DO NOT touch the battery receptacle terminals with metal objects.

1. Plug the power cord into the receptacle on the back of the battery charger (see figure 1).
2. Plug the other end of the power cord into a hospital grade wall outlet.

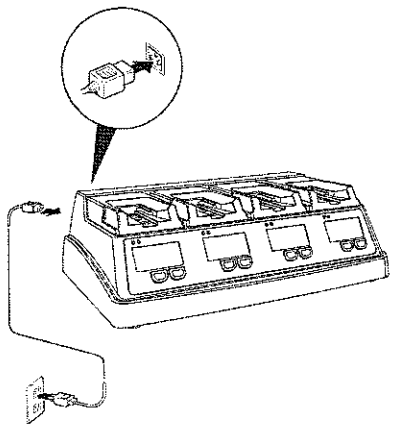


Figure 1 Power Connection

NOTES:

- During the power-up sequence, diagnostic tests are performed to ensure the battery charger and each installed module is operational. During these tests, the indicator lights and information screen will briefly illuminate.
- The battery charger software and hardware revision numbers will also appear (see figures 2 and 3). If modules are installed, their revision numbers will also appear (see figure 4).
- If any ERROR messages appear during these tests, note the error code that appears in the counter area (see figure 5) and see the *Troubleshooting Guide* section for assistance.

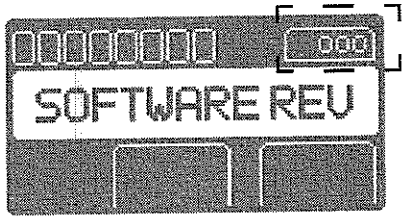


Figure 2 Software Revision Number Location

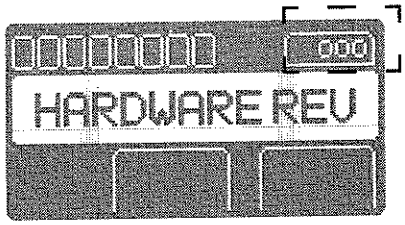


Figure 3 Hardware Revision Number Location

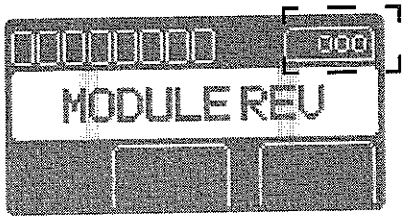


Figure 4 Module Revision Number Location

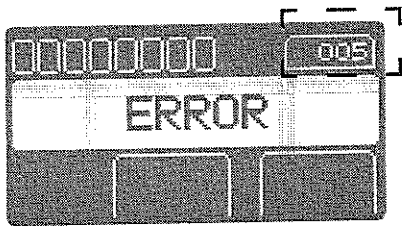


Figure 5 Error Message and Code Location

Instructions (cont'd)

To Charge Battery Pack

CAUTION: When battery packs require post-surgical sterilization, allow them to cool for one hour before charging. Excess heat buildup from sterilization and charging will damage the battery packs.

NOTES:

- During the charging sequence, a CHARGING message will appear and the state-of-health bars will increase from left to right.
- A state-of-health test is performed when the battery pack is fully charged. The charging sequence may take between five [5] and sixty [60] minutes based on the existing level of charge in the battery pack or the type of battery pack.
- To ensure maximum operating time, always charge the battery packs before sterilization even if the battery packs have not been used.
- Use only battery packs that have been charged within the last 48 hours.

1. Insert a clean, dry battery pack into a compatible module with a NO BATTERY information screen (see figure 6). Ensure the battery pack is properly seated. The information screen will momentarily display the battery pack part number (see figure 7).
2. The CHARGING message (see figure 8) will appear on the information screen and the associated yellow indicator light will illuminate.

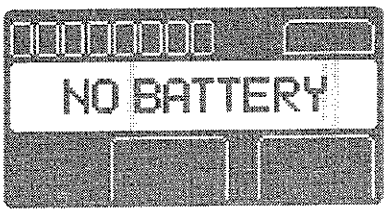


Figure 6 No Battery Information Screen

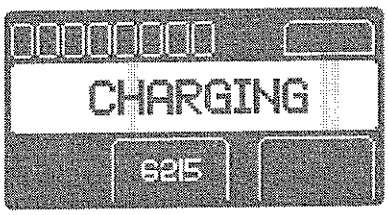


Figure 7 Battery Information Screen

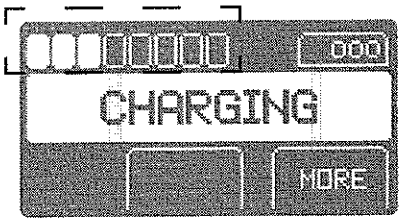


Figure 8 Charging Message and Bars Increase from Left to Right

NOTES:

- If the battery pack passes the state-of-health test and is fully charged, a READY message will appear. The counter area will update the charge cycle count. Five to eight bars will display in the state-of-health area indicating a battery pack ready for use (see figure 9).
- If the battery pack fails to pass the state-of-health test, a REPLACE message and symbol will appear (see figure 10). The yellow indicator light will also blink slowly. See *Troubleshooting Guide* section for assistance.

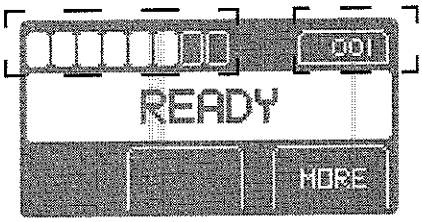


Figure 9 Ready Message with State-of-Health and Counter Update Locations

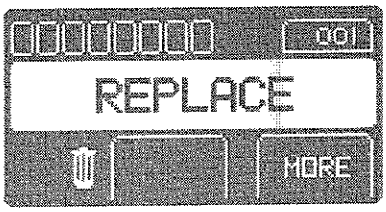


Figure 10 Replace Message

3. Once the battery pack is fully charged, the READY message will appear and the green indicator light will illuminate. Store the charged battery pack on the battery charger prior to sterilization.

NOTE: For extended storage, battery packs should remain on the battery charger to trickle charge and ensure the battery packs stay fully charged.

Instructions (cont'd)

To Condition Battery Pack

NOTES:

- During the conditioning sequence, the battery charger provides a controlled discharge of the battery pack.
- Up to four battery packs may be conditioned at any one time.
- During the conditioning sequence, a CONDITIONING message will appear. The state-of-health bars will decrease from right to left. Conditioning and recharging may take up to one and one half [1.5] hours or longer. The time will depend on the health of the battery pack and the type of battery pack. You may interrupt the conditioning sequence at any time. If conditioning is complete or interrupted, the battery charger will automatically enter a charging sequence.
- You may initiate the conditioning sequence manually from any one of the three information screens, including the READY, CHARGING or the REPLACE message screens.

1. From the READY, CHARGING or the REPLACE message screen, press the MORE button. The CONDITION? message screen will appear (see figure 11).

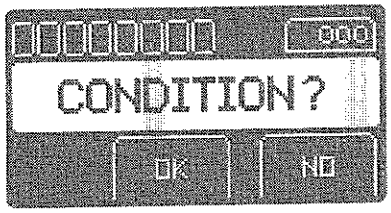


Figure 11 Condition Message

2. From the CONDITION? message screen, press the OK button to initiate battery pack conditioning. The CONDITIONING message will appear (see figure 12). If conditioning must be stopped for any reason, press the END button.

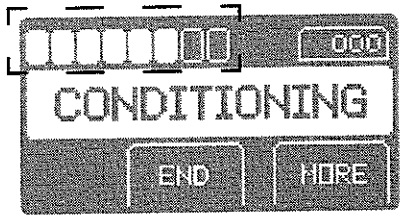


Figure 12 Conditioning Message and Bar Movement Right to Left

3. After conditioning is complete, the CHARGING message appears on the information screen to indicate the charging sequence has started.

NOTE: If CONDITION ERROR appears (see figure 13) in the message area of the information during a conditioning sequence, see *Troubleshooting Guide* section for assistance.

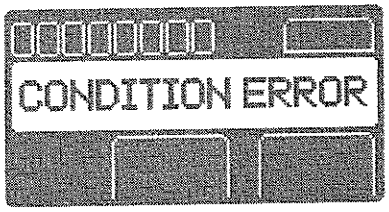


Figure 13 Condition Error Message

To Access More Information

NOTES:

- Some battery pack types allow you to access battery pack information about over temperature. If available, press the MORE button from any one of the four information screens, including READY, CHARGING, REPLACE and CONDITIONING.
- You may have to press the MORE button more than once to obtain the desired information. The information screen will return to its origin after a five second viewing period.

Instructions (cont'd)

To Access More Information (cont'd)

1. From the READY, CHARGING, or REPLACE message screen, press the MORE button. The CONDition BATTery option message screen will appear. Press the MORE button again to access the # (number) of OVER TEMP message screen (# of OVER TEMP screen will appear directly from the CONDITIONING screen). The counter will display the number of times the battery pack has been exposed to an over temperature condition (see figure 14).

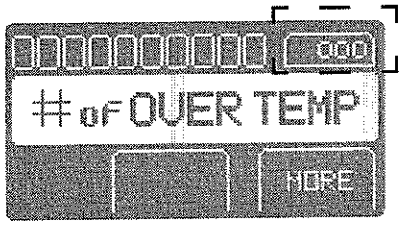


Figure 14 Total Number of Over Temperature Events

2. From the # of OVER TEMP message screen, press the MORE button to access the TIME OVER TEMP message screen. The counter will display how much time, in minutes, the battery pack has been exposed to over temperature conditions (see figure 15).

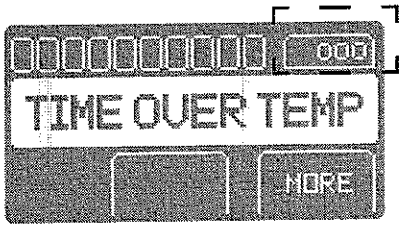


Figure 15 Total Time Exposed to Over Temperature Condition

To Disconnect Battery Charger

CAUTION: To reduce the risk of damage to the electrical plug and cord, pull the plug, not the cord when disconnecting the battery charger.

Periodic Maintenance

ACTION	INTERVAL
Inspect the battery charger and accessories for cuts in the cord, bent pins or contacts and/or cracks in the housing.	Before first and every use.

Storage and Handling

To ensure the longevity, performance and safety of this equipment, use the original packaging materials when storing or transporting this equipment.

Cleaning Recommendations

To Clean Battery Charger and Modules

CAUTIONS:

- DO NOT immerse the battery charger or modules in liquid.
- DO NOT use solvents, lubricants, or other chemicals to clean the battery charger or modules unless otherwise directed.
- DO NOT allow water to collect in the modules or on top of the battery charger.
- DO NOT allow water to enter the cooling vents on the back of the battery charger.
- DO NOT sterilize the battery charger or modules.

1. Disconnect the battery charger from the hospital grade wall outlet.
2. Wipe the surfaces of the battery charger with a soft cloth dampened with a non-abrasive, hospital disinfectant and immediately dry.

To Clean Battery Packs

See the care instructions supplied with the battery packs.

Troubleshooting Guide*

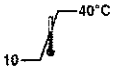
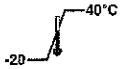
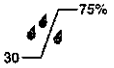
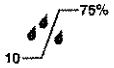
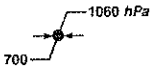
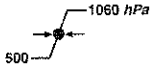
PROBLEM	COMPONENT	CAUSE	ACTION
Indicator lights do not illuminate.	Battery charger	No power to battery charger.	Reseat the cord connections on back of the battery charger and the hospital grade outlet.
		Battery charger is damaged.	Return the battery charger for repair.
NO MODULE appears in the message area of the information screen.	Charger module	Charger module is not properly connected.	Reseat the charger module connectors. See instructions supplied with the charger module.
		Charger module is damaged.	Replace the charger module.
NO BATTERY appears in the message area of the information screen.	Battery pack	Battery pack is not fully seated in module.	Reseat the battery pack.
	Battery pack/ Charger module	Contacts are dirty or corroded.	Clean the contacts.
REPLACE appears in the message area of the information screen.	Battery pack	Battery pack has exceeded its operational life.	Replace the battery pack.
Battery pack does not fit into module.	Charger module	Charger module is intended for different battery pack.	Install the proper charger module. See the instructions supplied with the charger module.
Charger module is loose.	Charger module	Screw is not secure.	Tighten the screw.
Battery pack becomes unusually hot during use or while charging.	Charger module	Battery pack is intended for different module.	Install the battery pack in the correct module.
	Battery pack	Internal problem.	Check battery pack status in the battery charger; replace the battery pack if indicated.
	Battery charger	Internal problem.	Return the battery charger for repair.
Information screen does not display battery pack state-of-health.	Battery charger	The battery charger will display the battery pack state-of-health at the end of the charge cycle.	Wait until the charge cycle is complete.
Information screen does not display cycle count or battery pack state-of-health information.	Battery pack	Battery pack is not a Stryker-approved battery pack.	Use Stryker battery packs only.
	Battery pack/ Charger module	Battery pack REF 4112/ Charger module is not design integrated.	--

*DO NOT service this equipment. If you require service, contact your Stryker sales representative or call Stryker customer service at 1-800-253-3210. Outside the US, contact your nearest Stryker subsidiary.

Troubleshooting Guide (cont'd)

PROBLEM	COMPONENT	CAUSE	ACTION
Yellow indicator flashes continuously.	Battery pack/ charger module	Battery pack and/or battery charger contacts may be dirty.	Clean the contacts.
NO MODULE appears in the message area of the information screen.	Charger module	Charger module is disconnected from battery charger.	Connect the charger module to the battery charger.
	Charger module	Charger module is failing to communicate with the battery charger.	Replace the charger module.
ERROR code **005** appears in the counter area of the information screen.	Battery pack	Battery pack contact is corroded.	Clean the battery pack contact.
	Battery pack	Battery pack contact is damaged.	Replace the battery pack.
	Battery pack	Battery pack ID is not present.	Replace the battery pack.
	Battery pack	Battery pack has lost smart communication function.	Replace the battery pack.
	Battery pack	Refurbished battery pack is not programmed.	Replace the battery pack.
	Charger module	Charger module contact is corroded.	Clean the charger module contact.
	Charger module	Charger module contact is damaged.	Replace the charger module.
	Battery charger	Battery charger contact is corroded.	Clean the battery charger contact.
	Battery charger	Battery charger contact is damaged.	Return the battery charger for repair.
CONDITION ERROR appears in the message area of the information screen.	Battery charger	Battery charger component is malfunctioning.	Return battery charger for repair.
Sporadic electrical interference is experienced.	Battery charger	Electrical noise is present.	Turn off all electrical equipment not in use. Relocate electrical equipment; increase spatial distance. Plug electrical equipment into different electrical outlets.

Specifications*

Model:	REF 6110-120 Four-Station, Modular Battery Charger	
Electrical:		
Input	100-120 V ~, 3.0 A, 50-60 Hz; 230 V ~, 1.5 A, 50-60 Hz	
Output	Open Circuit 22 V ⎓	
Cord	2 m long, fitted with NEMA 5-15 hospital grade plug (USA) 2.5 m long, fitted with CEE 7/7 plug (European)	
Size:	5.125 in. [130 mm] height 10.125 in. [257 mm] width 15.5 in. [394 mm] length	
Weight:	11.5 lbs. [5.2 kg]	
Enclosure Protection:	IPX0 Ordinary Equipment	
Equipment Type:	Class I	
Duty Cycle:		Continuous Operation
Ground Type:		Protective Earth Ground
Approval:		CSA International CAN/CSA-C22.2 No. 601.1-M90 UL 60601-1 IEC 60601-1
Environmental Conditions:	**Operation**	**Storage and Transportation**
Temperature:		
Relative Humidity:		
Atmospheric Pressure:		

*Specifications are approximate and may vary from unit to unit or as a result of power supply fluctuations.

Specifications (cont'd)

Guidance and manufacturer's declaration - electromagnetic emissions

The System 6 Battery Charger is intended for use in the electromagnetic environment specified below. The customer or the user of the System 6 Battery Charger should assure that it is used in such an environment.

Emissions test	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The System 6 Battery Charger uses RF energy only for its internal function. Therefore, its RF emissions are very low and are not likely to cause any interference in nearby electronic equipment.
RF emissions CISPR 11	Class A	The System 6 Battery Charger is suitable for use in all establishments other than domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations/ flicker emissions IEC 61000-3-3	Complies	

Guidance and manufacturer's declaration -electromagnetic immunity

The System 6 Battery Charger is intended for use in the electromagnetic environment specified below. The customer or the user of the System 6 Battery Charger should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6 Radiated RF IEC 61000-4-3	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	3 Vrms 150 kHz to 80 MHz 3 V/m 80 MHz to 2.5 GHz	Portable and mobile RF communications equipment should be used no closer to any part of the System 6 Battery Charger, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter. Recommended separation distance $d=1.67\sqrt{P}$ $d=1.67\sqrt{P}$ 80 MHz to 800 MHz $d=2.33\sqrt{P}$ 800 MHz to 2.5 GHz Where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m) Interference may occur in the vicinity of equipment marked with the following symbol: 

NOTE 1: At 80 MHz and 800 MHz the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

Specifications (cont'd)

Guidance and manufacturer's declaration - electromagnetic immunity

The System 6 Battery Charger is intended for use in the electromagnetic environment specified below. The customer or the user of the System 6 Battery Charger should assure that it is used in such an environment.

Immunity test	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic discharge (ESD) IEC 61000-4-2	±6 kV contact ±8 kV air	±2, 4, 6 kV contact ±2, 4, 8 kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30%.
Electrical fast transient/ burst IEC 61000-4-4	±2 kV for power supply lines ±1 kV for input/output lines	±2 kV for power supply lines ±1 kV for input/output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	±1 kV differential mode ±2 kV common mode	±1 kV differential mode ±2 kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5% U_T (>95% dip in U_T) for 0,5 cycle 40% U_T (60% dip in U_T) for 5 cycles 70% U_T (30% dip in U_T) for 25 cycles <5% U_T (>95% dip in U_T) for 5 seconds	95% Reduction (10 ms) 60% Reduction (100 ms) 30% Reduction (500 ms) 95% Reduction (5 sec)	Mains power quality should be that of a typical commercial or hospital environment. If the user of the System 6 Battery Charger requires continued operation during power mains interruptions, it is recommended that the System 6 Battery Charger be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m at 50 Hz CRT 1A/m	Power frequency magnetic fields should be at levels characteristics of a typical location in a typical commercial or hospital environment.

NOTE: U_T is the alternating current mains voltage prior to application of the test level.

Specifications (cont'd)

Recommended separation distances between portable and mobile RF communications equipment and the System 6 Battery Charger

The System 6 Battery Charger is intended for use in the electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the System 6 Battery Charger can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the System 6 Battery Charger as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter W	Separation distance according to frequency of transmitter m		
	150 kHz to 80 MHz $d = [\frac{3,5}{V_1}]\sqrt{P}$	80 MHz to 800 MHz $d = [\frac{3,5}{E_1}]\sqrt{P}$	800 MHz to 2.5 GHz $d = [\frac{7}{E_1}]\sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.37	0.37	0.74
1	1.17	1.17	2.33
10	3.70	3.70	7.37
100	11.70	11.70	23.30

For transmitters rated at a maximum output power not listed above, the recommended separation distance d in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1: At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2: These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

ES/DE/FR/IT/NL 6110-120-710
JA/KO/ZH 6110-120-720
SV/DA/FI/PT 6110-120-730
PL/EL 6110-120-750

Stryker Instruments
4100 E. Milham
Kalamazoo, Michigan
(USA) 49001
1-269-323-7700
1-800-253-3210

EC REP

Stryker France
ZAC Satolas Green Pusignan
Av. de Satolas Green
69881 MEYZIEU Cedex
France

stryker®

2006/11 6110-120-700 Rev-C www.stryker.com

stryker®

Surgical

System 6
Aseptic Battery System

- Powerful -Significant increase in battery capacity
- Simple -Easy to handle and deliver in the sterile field
- Sterile – Positive feedback from locking lever ensures that the battery housing is secure
- Versatile – Modules accommodate all sterile and non-sterile System 6 batteries

System 6
Aseptic Battery System

stryker®

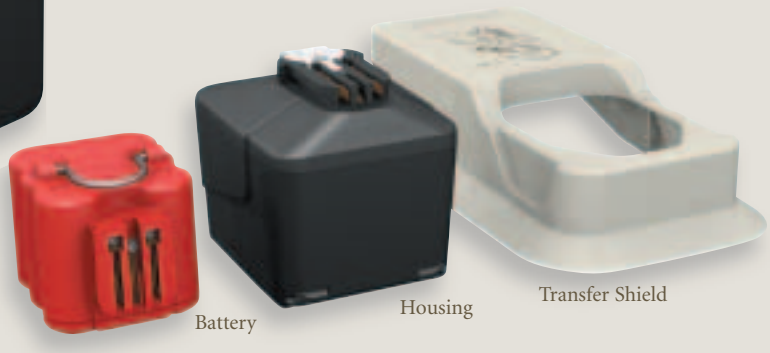
Surgical

6126-000-000
System 6 Aseptic
Battery Kit

- Positive locking mechanism on the housing ensures a sterile environment
- Ergonomic lock lever designed for long-term comfort and use

System Features

- Simple 3 piece aseptic delivery to the sterile field
- Compact battery housing provides balance and comfort
- Ease of access for battery insertion with 180˚ opening lid
- 90% more capacity than the System 5 aseptic battery



Ordering Information

6126-000-000	System 6 Aseptic Battery Kit (Housing, Transfer Shield, and Battery)
6126-110-000	System 6 Non-sterile Battery
6126-120-000	System 6 Aseptic Housing
6126-130-000	System 6 Transfer Shield
6110-120-000	System 6 Battery Charger
6110-625-000	System 6 Battery Module (6215, 6212, and 6126-110 Batteries)
6102-455-000	System 6 Aseptic Sterilization Case

Literature Number: **9100-001-05**1 **Rev. None**
UnDe/P.S.

Stryker Instruments
4100 East Milham Avenue
Kalamazoo, MI 49001 USA
t: 269 323 7700 f: 800 999 3811
toll free: 800 253 3210

www.stryker.com

stryker®

Surgical

System 6
The **Power** You Demand

Advancing Orthopaedics with power, speed, versatility, reliability and performance.

The **History** You Trust

System 6 Rotary Handpieces

Stryker, the leader in cordless power

Advancing Orthopaedics with power, speed, versatility, reliability and performance

6203-000-000
Single Trigger
Rotary Handpiece

System 6 Rotary Handpieces

- Now providing more options for greater versatility and surgeon preference
- One handpiece allows for both high speed drilling and high torque reaming
- Quick and easy selection of direction and safety options
- Available in Single and Dual Trigger models

6205-000-000
Dual Trigger
Rotary Handpiece

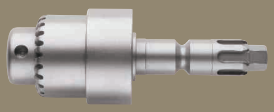
Drilling and Reaming Attachments

6203-110-000 Small Synthes® Quick Connect

6203-135-000 Hudson® Modified Trinkle

6203-131-000 1/4" Stryker Adj. Keyed Chuck

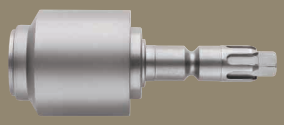
6203-160-000 Trinkle Attachment



6203-132-000 5/32" Stryker Adj. Keyed Chuck

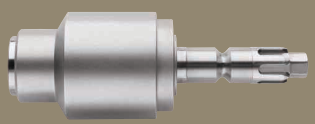
6203-113-000 Hudson® Attachment

6203-133-000 1/4" Stryker Adj. Keyless Chuck



6203-210-000 Synthes® Reaming Attachment (Large)

6203-134-000 1/8" Stryker Adj. Keyless Chuck



6203-215-000 Synthes® DHS Reaming Attachment

6203-062-000
Wire Collet
0.027"-0.110"
(0.7mm-2.8mm)

6203-125-000
Pin Collet
0.079"-0.157"
(2.0mm-4.0mm)

System 6 Saws

System 6 Heavy Duty Saws

- Advanced Motor Technology provides increased torque for a faster and more efficient cut

6208-000-000
Sagittal Saw

6206-000-000
Reciprocating Saw

6207-000-000
Sternum Saw

4107-008-000
Sternum Blade Guard

Sagittal Saw

- Two speed control allows for a wider range of cutting options

Reciprocating Saw

- Smaller size for better ergonomics and ease of use

Sternum Saw

- Increased cutting speed for a more aggressive cut

6215-000-000
System 6 Battery

6212-000-000
System 6 Small Battery

Battery Charger

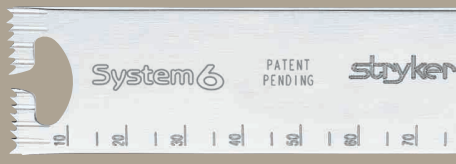
- Quickly charges System 6 batteries
- Modular design allows for 4 different batteries to be charged at the same time
- Interactive screen allows user to assess the condition of the battery and read battery usage
- Battery charging station diagnoses battery levels and usage

Batteries

- Increased run time for greater reliability

6110-120-000
System 6 Battery Charger

- See bur & blade guides for a complete list of available cutting accessories

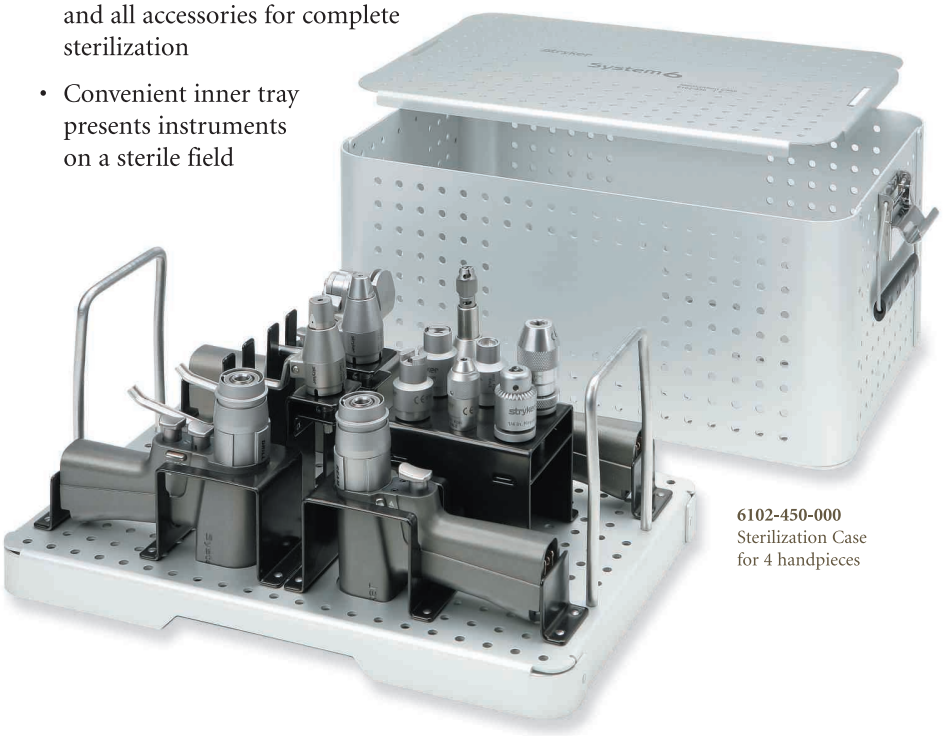


System 6 Accessories

stryker®

System 6 Sterilization

- Modular sterilization containers assist in the handling, storage, and sterilization of your System 6 components
- Options for up to 4 handpieces and all accessories for complete sterilization
- Convenient inner tray presents instruments on a sterile field



6102-450-000
Sterilization Case
for 4 handpieces

Joint Replacements

Trauma, Extremities, Deformities

Craniomaxillofacial

Spine

Biologics

Surgical Products

Neuro & ENT

Interventional Pain

Navigation

Endoscopy

Communications

Imaging

Patient Handling Equipment

EMS Equipment

Ordering Information

Handpieces

6203-000-000	Single Trigger Rotary Handpiece
6205-000-000	Dual Trigger Rotary Handpiece
6206-000-000	Reciprocating Saw
6207-000-000	Sternum Saw
6208-000-000	Sagittal Saw

Attachments

4107-008-000	Sternum Blade Guard
6203-110-000	Small Synthes® Quick Connect
6203-113-000	Hudson® Attachment
6203-131-000	1/4" Stryker Adj. Keyed Chuck
6203-132-000	5/32" Stryker Adj. Keyed Chuck
6203-133-000	1/4" Stryker Adj. Keyless Chuck
6203-134-000	1/8" Stryker Adj. Keyless Chuck
6203-135-000	Hudson® Mod. Trinkle Attachment
6203-160-000	Trinkle Attachment
6203-210-000	Synthes® Reaming Attachment (Large)
6203-215-000	Synthes® DHS Reaming Attachment
6203-062-000	Wire Collet
6203-125-000	Pin Collet

Accessories

6110-120-000	System 6 Battery Charger
6215-000-000	System 6 Battery
6212-000-000	System 6 Small Battery
6126-000-000	System 6 Aseptic Battery Kit (Housing, Transfer Shield, and Battery)
6126-110-000	System 6 Non-sterile Battery
6110-412-000	CD2 Module (4112 Battery)
6110-422-000	CD2 Diagnostic Module (4212 and 4215 Batteries)
6110-426-000	Aseptic Module (4126-110 and 4222-110 Batteries)
6110-625-000	System 6 Battery Module (6215, 6212 and 6126-110 Batteries)
6102-450-000	Sterilization Case for 4 handpieces
6102-451-000	Sterilization Case for 1 handpieces
6102-452-000	Sterilization Case for 2 handpieces
6102-453-000	Sterilization Case for Sternum Saw (Plastic)
6102-454-000	Sterilization Case for 3 handpieces

Literature Number: **9100-001-026 Rev. None**
UnDe/NAC

Stryker Instruments
4100 East Milham Avenue
Kalamazoo, MI 49001 USA
t: 269 323 7700 f: 800 999 3811
toll free: 800 253 3210

www.stryker.com